Docket No.: 264464US0PCT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: GROUP: 1616
Satoru TAKAHASHI, et al.

SERIAL NO: 10/521,755 EXAMINER: brown, c.

FILED: January 19, 2005

FOR: HERBICIDAL COMPOSITION

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Sir:

1. Now comes Makoto Fujinami who deposes and states that:

2. I am a graduate of Kyoto University and received my Master's degree in the year 1997.

3. I have been employed by Kumiai Chemical Industry Co., Ltd., since 1997, and I have been conducting research in the field of research and development works relative to herbicide compositions and other related products of the company for 12 years.

4. I am familiar with the prosecution history of the present application (i.e., U.S. 10/521,755) and/or the prosecution history of the present application has been explained to me by counsel.

5. I have read and understood the Office Action of January 26, 2009 and/or the January 26, 2009 Office Action has been explained to me by counsel.

6. I have read and understood the Ziemer (U.S. 2003/013010) and Nakatani (U.S. 7,238,689) publications cited by the Examiner in the January 26, 2009 Office Action or foreign language equivalents thereof.

7. In order to demonstrate the effects of one or more embodiments of the present invention, the following experiments were carried out by me or under my direct supervision and control.

Test Example X-1

Tests for herbicidal effects were conducted in the same manner as described in "Application Example 1" on pages 143 to 146 of the present specification provided that the weeds were changed to green foxtail (*Satria viridis*) and velvetleaf (*Abutilon theophrasti Medic*).

The herbicidal effects are indicted by percentage (from 0 to 100%) and the results are indicated in Table X-1 (see the Appendix).

Further, theoretical herbicidal effects obtainable by blending herbicides are calculated from the following formula [1] (Colby's formula) and the calculated theoretical values are indicated by the Compounds titled "(Exp.)" in Table X-1.

Formula [1]: $T = P1 + [P2(100 - P1)/100]$

P1: Herbicidal effect obtained when a predetermined amount of active ingredient of a herbicidal component 1 is applied to weeds.

P2: Herbicidal effect obtained when a predetermined amount of active ingredient (y) of the herbicidal component 2 is applied to weeds grown under the same conditions.

T: Herbicidal effect obtained when a predetermined amount of active ingredient (x) of the herbicidal component 1 and a predetermined amount of active ingredient (y) of the herbicidal component 2 are applied to weeds grown under the same conditions.

Colby's formula: Please see "Calculation synergistic and antagonistic response of Herbicide combinations". Weeds 15, pages 20-22; 1967.

Test Example X-2

Tests for herbicidal effects were conducted in the same manner as described in Application Example 1 of the present specification, and the herbicidal effects are indicated by percentage (from 0 to 100%) as made in Test Example X-1, and the results are indicated in Table X-2.

The weed used for the test was common chickweed (*Stellaria media Villris*).

"(Exp.)" in Table X-2 is a theoretical value of herbicidal effect obtainable by blending the herbicides as previously mentioned.

Test Example X-3

Tests for herbicidal effects were conducted in the same manner as described in Application Example 1 of the present specification, and the herbicidal effects are indicated by percentage (from 0 to 100%) as made in Test Example X-1, and the results are indicated in Table X-3.

Weeds tested were crabgrass (*Digitaria ciliaris*) and common lambsquarters (*Chenopodium album*).

"(Exp.)" in Table X-3 is a theoretical value of herbicidal effect obtainable by blending the herbicides as previously mentioned.

From the results indicated in Tables X-1, X-2 and X-3, it is clearly understood that the herbicidal effects of the herbicidal composition of the present invention are higher than the theoretical values of herbicidal effects of respective herbicides.

8. It is my opinion based on the data of Tables X-1, X-2 and X-3 that the herbicidal composition of the present claims (i.e., one that contains the ingredients identified as components i) and ii) recited the present claims) provides an herbicidal effect that is greater than the theoretical cumulative effect. Such a result would not have been expected

from theory which, as explained above, provides a different lower cumulative herbicidal result.

9. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

10. Further deponent saith not.

Makoto Fujinami

Signature Makoto Fujinami

April 13, 2009

Date

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APPENDIX

Table X-1

Compound	Amount of active ingredient (g a.i./ha)	Herbicidal effect (%)	
		green foxtail (*Satria viridis*)	velvetleaf (*Abutilon theophrasti Medic*)
3-0188	16	87	27
isoxaflutole	12.5	67	99
(Exp.) 3-0188 +isoxaflutole	16 + 12.5	96	99
3-0188 + isoxaflutole	16 + 12.5	99	100
3-0188	16	87	27
flumetsulam	10	20	18
(Exp.) 3-0188 + flumetsulam	16 + 10	90	40
3-0188 + flumetsulam	16 + 10	95	68
3-0188	16	87	27
mesotrione	25	0	80
(Exp.) 3-0188 + mesotrione	16 + 25	87	85
3-0188 + mesotrione	16 + 25	92	100
3-0188	32	88	-
glyphosate	265	0	-
(Exp.) 3-0188 + glyphosate	32 + 265	88	-
3-0188 + glyphosate	32 + 265	97	-

Table X-2

Compound	Amount of active ingredient (g a.i./ha)	Herbicidal effect (%) common chickweed (*Stellaria media Vilyris)*
3-0188	18.8	50
pendimethalin	800	80
(Exp.) 3-0188 +pendimethalin	18.8 + 300	90
3-0188 + pendimethalin	18.8 + 300	98
3-0188	18.8	50
thifensulfuron-methyl	15	5
(Exp.) 3-0188 + thifensulfuron-methyl	18.8 + 15	53
3-0188 + thifensulfuron-methyl	18.8 + 15	77
3-0188	18.8	50
diflufenican	37.5	40
(Exp.) 3-0188 + diflufenican	18.8 + 75	70
3-0188 + diflufenican	18.8 + 75	80

Table X-3

Compound	Amount of active ingredient (g a.i./ha)	Herbicidal effect (%)	
		crabgrass (*Digitaria ciliaris*)	common lambsquarters (*Chenopodium album*)
3-0188	75	66	80
flumioxazin	25	30	70
(Exp.) 3-0188 +flumioxazin	75 + 25	76	94
3-0188 + flumioxazin	75 + 25	100	100
3-0188	32	0	89
linuron	50	93	6
(Exp.) 3-0188 + linuron	32 + 50	93	42
3-0188 + linuron	32 + 50	98	98
3-0188	32	98	89
prometryn	75	0	50
(Exp.) 3-0188 + prometryn	32 + 75	93	95
3-0188 + prometryn	32 + 75	100	100